

Listing of Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method for supporting a handoff of a mobile node from a first agent of a first network to a second agent of a second network, the method comprising the steps of:
upon initiation of the handoff, sending a first message to the first agent requesting the first agent to buffer at the first agent all packets being sent to the mobile node, wherein the first message is part of a registration request protocol to the second agent;
completing the handoff to the second agent; and
responsive to the completing, sending a second message to the first agent requesting the first agent to forward the packets buffered at the first agent to the second agent, wherein the second message is also a part of the registration request protocol.
2. Canceled
3. (Currently Amended) The method of claim [[2]] 1 wherein the second message ~~is also part of the registration request protocol, occurring~~ occurs after the second agent has been authorized.
4. (Original) The method of claim 1 wherein the first and second networks are mobile internet protocol networks.
5. (Original) The method of claim 4 wherein the second agent is a foreign agent to the mobile node.
6. (Original) The method of claim 1 wherein the mobile node sends the first message to the first agent.
7. (Currently Amended) A method for supporting a handoff of a mobile node from a first agent of a first network to a second agent of a second network, the method comprising the steps of:
upon initiation of the handoff, the second agent sending a first message to the first agent requesting the first agent to buffer at the first agent any packets being sent to the mobile node, wherein the first message is part of a registration request protocol to the second agent;

completing the handoff of the mobile node to the second agent;

responsive to the completing, sending a second message to the first agent requesting the first agent to forward the buffered at the first agent to the second agent, wherein the second message is also a part of the registration request protocol.

8. (Currently Amended) A computer program product for facilitating a handoff of a mobile node from a first agent to a second agent, the computer program product [[stored on]] comprising a computer-readable medium [[and comprising]] having stored thereon computer-executable instructions for:
determining that the handoff is to be initiated;

before a transmission of a handoff request message, sending a first message to the first agent requesting the first agent to buffer at the first agent any packets being sent to the mobile node, wherein the first message is part of a registration request protocol to the second agent;

completing the handoff to the second agent; and

responsive to the completing, [[signaling]] sending a second message to the first agent requesting the first agent to forward the packets buffered at the first agent to the second agent, wherein the second message is also a part of the registration request protocol.

9. Canceled

10. (Currently Amended) The computer program product of claim [[9]] 8 wherein the second message ~~is also part of the registration request protocol, occurring~~ occurs after the second agent has been authorized.

11. (Previously Presented) The computer program product of claim 8 wherein the first and second networks are mobile internet protocol (IP) networks.

12. (Previously Presented) The computer program product of claim 11 wherein the second agent is a foreign agent to the mobile node.

13. (Previously Presented) The computer program product of claim 8 wherein the second agent sends the first message to the first agent.

14. (Currently Amended) The computer program product of claim 8 wherein the computer-readable medium further has stored thereon [[further comprising]] computer-executable instructions for sending, by the mobile node, a buffer control request.

15. (Currently Amended) The computer program product of claim [[15]] 8 wherein the computer-readable medium further has stored thereon [[further comprising]] computer-executable instructions for sending an indicator to the second agent that the mobile node has requested buffering.

16. (Previously Presented) The computer program product of claim 8 wherein the first message includes an indicator of a buffer size.

17. (Currently Amended) The computer program product of claim 8 wherein the computer-readable medium further has stored thereon [[further comprising]] computer-executable instructions for:
discarding, by the first agent, predetermined packets when a maximum number of packets have been received.

18. (Currently Amended) The computer program product of claim 8 wherein the computer-readable medium further has stored thereon [[further comprising]] computer-executable instructions for:
signaling the first agent to delete the buffered packets.

19. (Currently Amended) The computer program product of claim 18 wherein the computer-readable medium further has stored thereon [[further comprising]] computer-executable instructions for:
signaling forwarding any packets received after the buffered packets are deleted.

20. (Previously Presented) The computer program product of claim 8 wherein the first message includes an indicator of a maximum length of time that buffering is needed.

21. (Previously Presented) The computer program product of claim 8 wherein the first message includes an indicator of authenticity for the buffering.

22. (Previously Presented) The computer program product of claim 11 wherein the first message includes an IP filter to identify certain packets that do not need to be buffered.

23. (Currently Amended) A computer program product for a new agent of a new network to initiate communication with a mobile node, the computer program product [[stored on]] comprising a computer-readable medium [[and comprising]] having stored thereon computer-executable instructions for:

- determining that the mobile node is in handoff;
- sending a first message to the old agent requesting the old agent to buffer at the old agent any packets being sent to the mobile node, wherein the first message is part of a registration request protocol to the second agent;
- completing the handoff of the mobile node; and
- responsive to the completing, [[signaling]] sending a second message to the old agent requesting the old agent to forward the packets buffered at the old agent to the new agent, wherein the second message is also a part of the registration request protocol.

24. (Previously Presented) The computer program product of claim 23 wherein the old and new networks are mobile internet protocol networks.

25. (Previously Presented) The computer program product of claim 23 wherein the new agent is a foreign agent to the mobile node.

26. (Previously Presented) The computer program product of claim 23 wherein the first message is sent by the mobile node.

27. (Previously Presented) The computer program product of claim 23 wherein the new agent sends the first message to the old agent.

28. (Currently Amended) A system for supporting a handoff of a mobile node from a first agent of a first network to a second agent of a second network, the system comprising:

- means for sending, before a transmission of a handoff request message, a first message to the first agent requesting the first agent to buffer at the first agent any packets being sent to the mobile node, wherein the first message is part of a registration request protocol to the second agent;
- means for completing the handoff to the second agent; and
- means responsive to completing the handoff for sending a second message to the first agent requesting the first agent to forward the packets buffered at the first agent to the second agent, wherein the

second message is also a part of the registration request protocol.

29. Canceled

30. (Currently Amended) The method of Claim [[29]] 28 wherein the second message ~~is also part of the registration request protocol, occurring~~ occurs after the second agent has been authorized.

31. (Currently Amended) A computer program product for facilitating a handoff of a mobile node from a first agent to a second agent, the computer program product [[stored on]] comprising a computer-readable medium [[and comprising]] having stored thereon computer-executable instructions for:
determining that the handoff is to be initiated;
the second agent sending a first message to the first agent requesting the first agent to buffer at the first agent any packets being sent to the mobile node, wherein the first message is part of a registration request protocol to the second agent;
completing the handoff to the second agent; and
responsive to the completing, [[signaling]] sending a second message to the first agent requesting the first agent to forward the packets buffered at the first agent to the second agent, wherein the first message is part of a registration request protocol to the second agent.

32. Canceled

33. (Currently Amended) The computer program product of Claim [[32]] 31 wherein the second message ~~is also part of the registration request protocol, occurring~~ occurs after the second agent has been authorized.